BUSINESS CASE ANALYSIS

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Introduction

DOD organizations are endeavoring to find ways to preserve and maintain warfighting force structures in spite of drastic budgetary constraints and personnel shortages. Consequently, many of the Services have focused on reducing support costs to maintain warfighting capability. The natural trade-off between downsizing, streamlining, and consolidating functions has become a reality in DOD's search for reducing costs associated with operations and infrastructure.

The Business Case Analysis (BCA) is often used in industry, particularly in the information technology (IT) arena, among project managers and in companies contemplating mergers and acquisitions. As Defense agencies continue to face current and future challenges in the acquisition arena, the need to conduct BCAs is becoming more apparent. At the highest levels, it is imperative that decisionmakers develop long-range strategic plans that define mission, functional requirements, and critical success parameters.

What Is A BCA?

A BCA is a valuable tool that decisionmakers use to evaluate alternative approaches in the allocation of scarce resources and in developing sound business process solutions. It provides a structured and systematic methodology for assessing the financial consequences of business decisions. The general methodology, typically known as a financial analysis, can be tailored to fit particular circumstances.

In response to recent congressional mandates, many federal agencies have developed investment management processes to better select, plan, and manage their major programs, projects, and initiatives. During the selection process, agencies establish priorities and make decisions regarding which efforts will be funded. An important characteristic of the selection process is that a project's proposed benefits and risks are analyzed *before* approval is granted to obligate a significant amount of funds for a particular effort. The BCA performs this function.

There are common elements that apply in all circumstances, varying only in the degree of application to the analysis of particular problems. The common elements include, but are not limited to, the following:

- **Problem Definition** . This element includes establishing an objective for the analysis, stating the assumptions that frame the analysis and, as appropriate, laying out alternative solutions to the problem being analyzed.
- **Data Collection Phase** . This element identifies the data needed to meet the objective of the analysis, a

BUSINESS CASE ANALYSIS: DCMA

Purpose of business

Resources

Analysis

Workload trend data

Performance plan adjustments and unit cost impacts

Discussion of efforts to maximize use of existing resources

Impact if additional resources are disapproved

Figure 1.

method of classifying the data in terms of the types of data required (cost, overload, performance, etc.), and a data collection plan, which specifically addresses the data to "fill in the blanks" of the identification and classification studies.

• **Evaluation Phase** . This element analyzes the data to address the objective of the study and to develop the findings that specifically relate the data to the objective.

• **Reporting Phase** . In this phase, a report or briefing is prepared that presents the conclusions and recommendations of the study.

Air Force Use Of BCAs

The Air Force has found the BCA to be very useful in its efforts to reduce total ownership costs of major weapon systems. From the Air Force perspective, the BCA is a decision document that links an investment decision to a strategic plan. A complete BCA documents the business operating environment, establishes a financial baseline for existing operations, portrays the results of an economic analysis on alternative investment opportunities, and describes the projected changes in the financial position after undertaking the proposed initiative. The Air Force's Reduction in Total Ownership Cost BCA package includes all of the components of a standard commercial BCA except that, after a formal economic analysis of the alternatives is completed, only the selected alternative is presented in the BCA.

Air Force BCA Plan

The BCA plan is the supporting documentation that accompanies the BCA package. The plan should contain sufficient documentation to communicate the proposed initiative. It may include all or part of the formal economic analysis to defend the initiative.

Part 1: Alignment
Section 1 Business needs and alignment with strategic business goals
Section 2 Assumption and constraints

Part 2: Gap Analysis
Section 3 Current state assessment
Section 4 Future state assessment
Section 5 Gap analysis

Part 3: Alternative Analysis
Section 6 Analysis of alternatives
Section 7 High-level logical design
Section 8 Cost or benefit analysis
Section 9 Conformance

Part 4: Project Management
Section 10 Risk analysis
Section 11 Acquisition strategy
Section 12 Project life-cycle analysis

Figure 2.
IT BCA sample outline

The BCA plan is designed to provide an overview of the proposed implementation and management of the initiative being undertaken. A financial profile portrays the cost and economic factors of the initiative. The plan should communicate these costs in terms of schedules and technical aspects of the proposed initiative. It includes the risk analysis, risk mitigation plans, and a summation of other alternatives considered in the formal economic analysis.

For additional information on how the Air Force makes use of BCAs, see its *Reduction in Total Ownership Cost Guidebook*, Version 2.1, dated Oct. 31, 2001.

Navy Use Of BCAs

According to the *Naval Supply Systems Command Business Case Analysis Guidebook for Fleet & Industrial Supply Center Partnerships*, dated March 1995, cost analysis, cost-benefit analysis, and functional economic analysis are the most popular categories of financial analyses used to assess business areas within DOD. The major differences between these three categories are found in the problem definition, types of data considered, and in the levels of complexity. Their differences may be summarized as follows:

• **Cost Analysis** . This analysis requires a simple statement of the problem and desired outcome of the analysis, well-defined global assumptions that clearly outline the scope of the analysis, a single preferred solution to be analyzed in comparison to the status quo, a preponderance of the data based on hard-documented and verifiable sources, and a straightforward presentation of the data in constant-year dollars, which compares costs of the status quo alternative to the costs of the preferred solution.

• **Cost-Benefit Analysis** . This analysis requires a formal requirements analysis, usually presented in

Agency Goals And Objectives	System Goals And Objectives
Agency Goal 1	System Goal 1
Objective 1	Objective 1
Objective 2	Objective 2
Objective 3	Objective 3
Agency Goal 2	System Goal 2
Objective 1	Objective 1
Objective 2	Objective 2
Objective 3	Objective 3

Figure 3.
Recommended IT BCA structure

a Mission Needs Statement, global and alternative assumptions that introduce greater complexity in the analysis of the problem, and consideration of multiple alternative solutions. More flexibility is allowed in the use of extrapolated data in the development of future costs and benefits of alternative solutions. This analysis may require a sensitivity analysis to test assumptions and constraints and the presentation of findings in terms of constant dollars, current year dollars, and net present value.

• **Functional Economic Analysis** . This analysis requires a formal requirements analysis, which includes development of all feasible alternative solutions; activity or process analysis; calculation of full costs and benefits of all alternative solutions; comparison of alternatives through multiple financial measures such as net present value, benefit-cost ratio, and amortization rates; mandatory sensitivity analysis of all key parameters; an analysis of risk through the development of risk-adjusted cash-flow projections, and the presentation of results comparing all feasible alternatives to the recommended solution.

DCMA Use Of BCAs

Research for this article revealed that the Defense Contract Management Agency (DCMA) also has experience with BCAs. A synopsis of DCMA's outline is shown in Figure 1.

BCAs In The IT World

Carole Meals, a Principal in the Center for Science and Technology, has worked a wide variety of IT and acquisition projects for Mitretek Systems clients and believes that the BCA is the sales document for the system. The BCA is input to the selection process and makes the business case for going forward with a project. The BCA, which should provide the rationale for why a project is critical to the agency's mission, includes information concerning scope, alternative considerations, estimated costs and return on investment, schedule, risk, and technical strategy.

In the IT arena, a BCA is generally divided into sections, and the sections are grouped with like sections into parts. A sample outline for an IT BCA is shown in Figure 2, and a recommended structure for contents of an IT BCA is shown in Figure 3. These figures are provided as tools to assist in developing BCAs, realizing that some tailoring will be necessary in adapting the structure for use in the acquisition arena.

Conclusion

This article is intended to spark interest in the topic of business case analyses and, hopefully, to motivate readers to search the guidebooks and Web sites provided to satisfy their quest for conducting a BCA. The more research that is conducted, the more comfortable acquisition personnel will become with the concept, and it will become second nature. Continued and consistent use of this concept within the Army will result in more sound business decisions. The best part, however, is that actual implementation of the BCA process will yield greater returns on the Army's resource investments of dollars, people, time, facilities, and effort.

For additional guidance and more detailed information on the topic, see the following Web sites and references: **http://www.safaq.rtoc.hq.af.mil**, **http://www.solutionmatrix.com/business-case-guide.html**, and **http://www.mitretek.org/pubs/Sigma_pubs_spring02/chap4.pdf**.

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